



**Queensland Competition Authority review of
Seqwater 2012-13 Grid Service Charges**

Response to submission of the SEQ Water Grid Manager

April 2012

Contents

Contents	2
Chapter 1 – Introduction.....	4
1.1 Glossary of defined terms.....	7
Chapter 2 – General issues.....	9
2.1 The role of the Water Grid Manager.....	9
2.2 SEQ Water Grid capacity.....	11
2.3 The Grid Contract and Seqwater’s compliance framework.....	12
2.4 Water quality standards	14
2.5 Capital planning and the new System Operating Plan (SOP).....	17
2.6 Regulatory budgeting for conditional capital projects.....	20
2.7 Other issues.....	21
Chapter 3 – Capital projects.....	22
3.1 South Maclean WTP.....	23
3.2 Woodford WTP and Caboolture WTP.....	24
3.3 Image Flat WTP.....	24
3.4 Molendinar WTP and Mudgeeraba WTP	26
3.5 Canungra WTP and Off-Stream Storage, and Beaudesert WTP.....	26
3.6 North Stradbroke Island WTP.....	27
3.7 Capalaba WTP.....	27
3.8 Gold Coast Desalination Plant.....	28
3.9 Western Corridor Recycled Water Scheme.....	29
3.10 Lake Macdonald.....	29
3.11 Wyaralong WTP	29
3.12 Kilcoy WTP.....	30
3.13 Boonah-Kalbar WTP.....	34

2012 – 2013 GRID SERVICE CHARGES SUBMISSION TO QCA

3.14	<i>Lowood WTP</i>	35
3.15	<i>Kooralbyn WTP</i>	35
3.16	<i>Rathdowney WTP</i>	36
3.17	<i>Jimna WTP</i>	37
3.18	<i>Various SCADA projects</i>	38

Chapter 1 – Introduction

Seqwater is the sole supplier of bulk drinking water in South East Queensland (SEQ).

Seqwater is a Grid Service Provider (GSP) that stores and treats water from dams, weirs, bores and other water storages, and also supplies desalinated water from the Gold Coast Desalination Plant (GCDP) and purified water from the Western Corridor Recycled Water Scheme (WCRWS). Seqwater is also responsible for managing:

- the catchments which surround its water sources;
- flood mitigation services;
- recreation facilities and services; and
- irrigation services.

Together with Linkwater, which transports the water through pipelines into the distribution system, Seqwater supplies bulk water to the SEQ Water Grid Manager (WGM). The WGM then sells the treated water to the council-owned retail distribution water companies (Unitywater, Allconnex Water and Queensland Urban Utilities), and other industry customers. Figure 1.1 below illustrates Seqwater's role in the structure of the water industry in SEQ.

Grid Service Charges (GSCs) are the amounts that Seqwater can charge the WGM for bulk water services.

The SEQ Water Market Rules (Market Rules) provide for the Queensland Competition Authority (QCA) (also known as the Economic Regulator) to investigate and recommend Grid Service Charges (GSCs) applicable to GSPs for the period from 1 July 2012 to 1 July 2013.¹

This is the second annual review process whereby Seqwater's GSCs have been investigated by the QCA, and is the first review since Seqwater's merger with WaterSecure.

This submission is a response to the WGM's submission to the QCA review. This response is set out as follows:

- Chapter 2 provides a response to several broad issues raised in the WGM submission; and

¹ 8.4(a)(ii) SEQ Water Market Rules, 1 July 2011.

- Chapter 3 examines the individual capital expenditure projects listed in the WGM's submission on a case-by-case basis.

Figure 1.1 – Structure of SEQ water industry


1.1 Glossary of defined terms

Figure 1.2 is a glossary of terms defined in this document.

Figure 1.2 – Glossary of defined terms

AWTP	Advanced Water Treatment Plant
Economic Regulator	Queensland Competition Authority (see also QCA)
GCDP	Gold Coast Desalination Plant
GSC	Grid Service Charge
GSP	Grid Service Provider
Market Rules	South East Queensland Water Market Rules
ML	Megalitre
Price Regulator	Queensland Minister for Energy and Water Utilities
QCA	Queensland Competition Authority
QWC	Queensland Water Commission
RAB	Regulatory Asset Base
ROP	Resource Operations Plan
SEQ	South East Queensland
Seqwater	Queensland Bulk Water Supply Authority
SOP	System Operating Plan
WAE	Water Access Entitlements
Water Grid	South East Queensland Water Grid
WaterSecure	Queensland Manufactured Water Authority, merged with Seqwater on 1 July 2011
WCRWS	Western Corridor Recycled Water Scheme

2012 – 2013 GRID SERVICE CHARGES SUBMISSION TO QCA

WGM	South East Queensland Water Grid Manager
WTP	Water Treatment Plant
WWTP	Wastewater (Sewage) Treatment Plant

Chapter 2 – General issues

This Chapter provides a response to several broad issues raised in the WGM submission, including:

- capacity issues, such as overall capacity in the SEQ Water Grid, capacity issues in isolated and non-Grid connected areas, peak demand issues, and the potential for the future rationalisation of assets following Grid connectivity;
- the importance of compliance to Seqwater’s operations, and how obligations in the Grid Contract fit with other statutory obligations and legislative instruments in Seqwater’s compliance framework;
- water quality standards and Seqwater’s approach to ensure that the bulk water it supplies is safe and compliant;
- the new System Operating Plan (SOP) process for capital planning, and Seqwater’s Asset Portfolio Master Plan; and
- regulatory budgeting issues with respect to capital projects that are considered likely to be needed, but are conditional on independent occurrences such as the outcomes of regional planning studies or government policy decisions.

2.1 The role of the Water Grid Manager

As the bulk water service provider to the Water Grid, Seqwater’s major customer is the WGM. The water that Seqwater catches, stores and treats is ultimately delivered to water consumers in SEQ via the WGM and the three distributor-retailer entities presently operating in SEQ:

- Unitywater supplying the Sunshine Coast and Moreton Bay local government areas;
- Allconnex Water supplying the Gold Coast, Logan and Redlands local government areas;² and
- Queensland Urban Utilities supplying the Brisbane, Ipswich, Somerset, Lockyer Valley and Scenic Rim local government areas.

The WGM also directly supplies to some major industrial water users such as power stations, as well as certain irrigators in the Central Brisbane Water Supply Scheme.³

² From 1 July 2012, Allconnex Water will cease providing retail water services and the Gold Coast, Logan and Redlands City Councils will resume the retail delivery of water in their areas.

Just as Seqwater has some monopoly characteristics, given its role as the sole supplier of bulk drinking water in SEQ, the WGM has similar monopoly and monopsony characteristics, as the sole customer of the urban bulk water that is supplied by Seqwater, and as the sole supplier of bulk water to the three distributor-retailers operating in SEQ.

The WGM is the operator of the Water Grid, has certain powers associated with the overall management of the Water Grid, and is also the owner of the urban water access entitlements in SEQ. Under the Market Rules,⁴ the WGM has the authority for issuing Grid Instructions to Grid participants including Seqwater and is responsible for monitoring compliance with those Instructions. The WGM also has certain responsibilities in relation to capital planning under the new System Operating Plan (SOP), discussed in more detail in section 2.4 below.

Additionally, there is a Ministerial instruction relating to the WGM's role in capital projects. On 20 October 2010, the Minister for Energy and Water Utilities made a formal request to establish a new capital expenditure advisory role for the WGM, namely to advise responsible Ministers that:

- there is a clear and appropriate need for proposed expenditure (from 2011-12 onwards); and
- a full range of options has been considered, including alternative ways of operating the Water Grid and utilising existing infrastructure.

This advisory role covers proposed expenditure of \$2M or more on infrastructure and information technology projects that deliver new capacity to the Grid or involve renewals costing \$2M or more, excluding drought projects and regionally significant projects. This advisory role is expressly intended to complement the role of the QCA in reviewing whether proposed expenditure is prudent and efficient.

The process requires Seqwater to provide relevant information to the WGM “*as part of annual operational planning processes*”. However, the precise timing and requirements of the process is not specified in the SOP or in the context of other economic regulatory requirements.

³ The WGM owns the water access entitlements (WAE) from the Central Brisbane Water Supply Scheme, and has contracts with these irrigators for supply of water under the entitlements. Seqwater has no contractual relationship with these specific irrigators.

⁴ See Chapter 4 of the SEQ Water Market Rules, 1 July 2011.

2.2 SEQ Water Grid capacity

The WGM's submission identifies that there is currently surplus capacity overall in the Water Grid, following the end of the Millennium Drought, recent periods of flooding and heavy rainfall, and the additional capacity of drought assets such as the GCDP and the WCRWS. Furthermore, customer demand for water remains relatively low following the Millennium Drought and the ongoing water restrictions imposed on urban users.

Peak demand

Seqwater notes that demand is not constant and that a simple assessment of overall capacity versus total demand does not consider issues such as seasonal and peak levels of demand.

Limits of Grid connection

There are also significant areas and populations around SEQ that are not connected to the Water Grid and are solely supplied bulk water from standalone WTPs. Many of these standalone WTPs are operating at close to current capacity, irrespective of the total capacity in the Water Grid.

A simple assessment of overall capacity versus total demand also does not consider how capacity and demand interact at various supply nodes.

Furthermore, it is important to consider how water allocations work in practice under Resource Operating Plans (ROPs) and Water Supply Schemes (WSS). It is not always a simple matter of being able to move water allocations between locations. For example, in the Logan WSS particular zones specify maximum allocations that can be taken and if, say, South Maclean WTP was switched off as is suggested, only 1,385ML of the 3,695ML in the Logan WSS would remain available for use at upstream locations such as Beaudesert. The difference would potentially be lost to the ocean and the system yield would be reduced accordingly. It would then be necessary to consider the timing and costs associated with bringing forward future water sources.

Potential rationalisation of assets

The WGM's submission makes a number of recommendations relating to the potential rationalisation of particular assets. Seqwater notes that some of these recommendations (relating to Woodford WTP and Caboolture WTP) mirror the outcomes of regional planning already conducted by Seqwater. The WGM was also made privy to Seqwater's planning to decommission a number of other assets September 2011 (Albert River, Aratula, Maleny Toogoolawah and Woorim).

Section 3.2 of the WGM's submission makes reference to the "Water Grid being complete". However, for isolated and standalone WTPs (and even many "connected" plants) any

rationalisation will require either further grid connection works, or at least additional work to assess that the distribution network assets can complement the decision, in order to have confidence that water supply to the relevant populations will continue on a permanent basis.

Seqwater also notes that the decommissioning of WTPs is not costless and that its capital budget for 2012-13 does not make provision for most of the suggestions for rationalisation that have been advanced.

2.3 The Grid Contract and Seqwater's compliance framework

As discussed in some detail in Chapter 5 of Seqwater's submission to the QCA of February 2012, Seqwater is legally obliged to maintain compliance with a range of legislative requirements, including Acts, Regulations, the Market Rules and other legislative instruments. The Grid Contract is one important area of compliance, out of approximately twenty broad areas of compliance for Seqwater.

Figure 2.1 below illustrates a number of sources of compliance obligations that relate specifically to Seqwater and some other water service providers:

Figure 2.1 – Sources of compliance obligations

Additionally, and equally importantly, there is also a range of other legislative and regulatory obligations that relate more generally to the operations of most businesses and entities operating in Queensland, and which also apply to Seqwater by virtue of its functions and governance arrangements.

These other compliance obligations can require Seqwater to take various steps or engage in various activities, quite distinct and separate to what may or may not be required as a result of the Grid Contract or the Grid Instructions issued by the WGM.

Examples include Workplace Health & Safety, laws relating to the protection of the environment and cultural heritage, laws relating to land ownership and building ownership, as well as various requirements imposed by Departments such as DERM and other directions issued by policy makers.

Most businesses, particularly those involved in the provision of essential services such as Seqwater, undertake significant expenditure and investments to manage their compliance with legislative obligations. It is therefore important to consider Seqwater's broader compliance obligations, not just the requirements of one important instrument, when assessing the prudence and efficiency of various capital projects. The various capital projects identified in the WGM's submission are discussed further in Chapter 3, including additional information about any compliance drivers where relevant.

2.4 Water quality standards

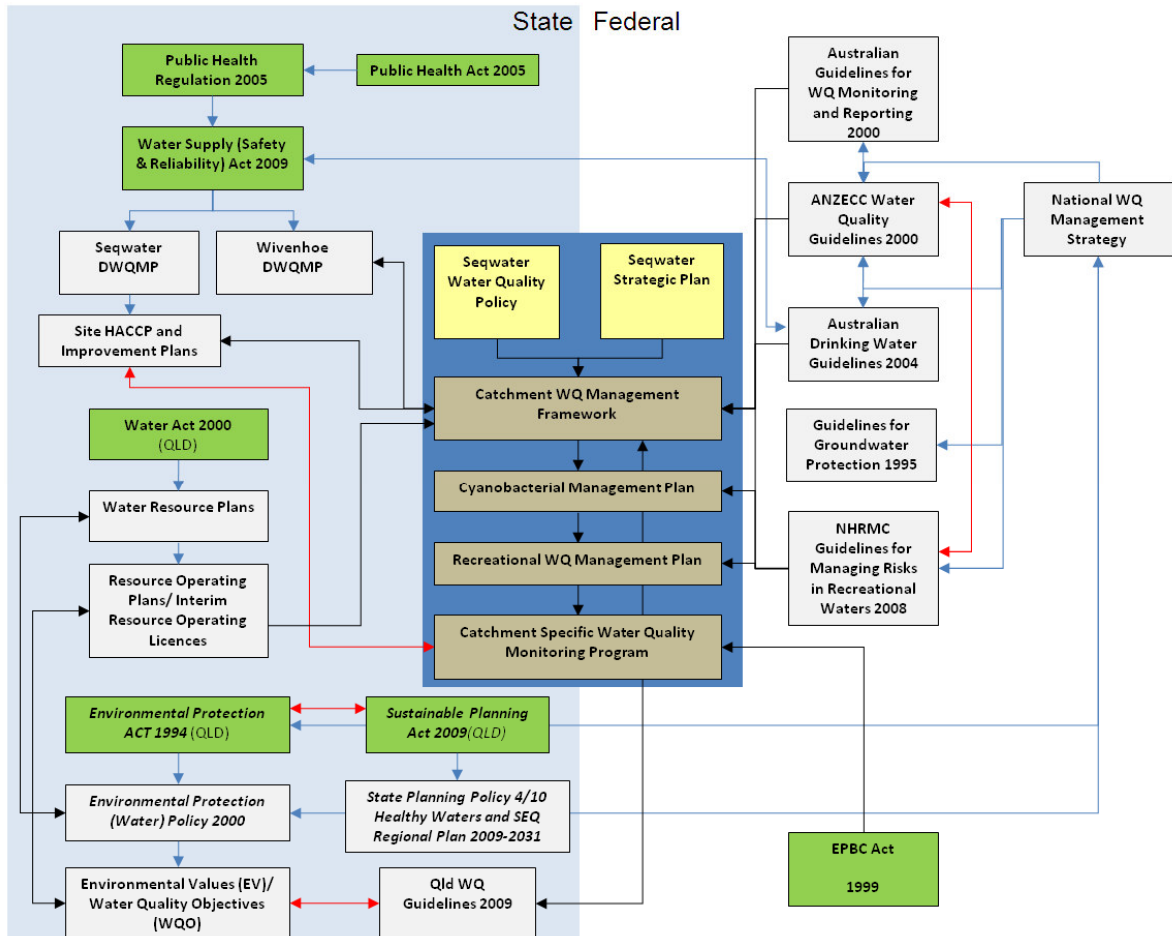
The WGM's submission states that water quality requirements are primarily contained in:

- the *Water Supply (Safety & Reliability) Act 2008*;
- the Grid Contract; and
- the Australian Drinking Water Guidelines.

However, as demonstrated in Figure 2.2 below, Seqwater's water quality compliance obligations are more complex and are drawn from a larger range of Acts and legislative instruments, both State and Federal.

Separately to the three sources of obligations listed above, Seqwater has a number of duties of care and obligations in the important area of public health. For example, section 57E of the *Public Health Act 2005* makes it an offence for a drinking water service provider such as Seqwater to supply drinking water that the provider knows, or reasonably ought to know, is unsafe (maximum penalty – 3000 penalty units / 2 years imprisonment).

Figure 2.2 – Seqwater’s water quality compliance obligations



Water quality obligations include health and aesthetic parameters and that the WGM contributes to the achievement of the aesthetic parameters through the Grid Instructions it issues for the operation of the Water Grid. Its submission also states that the aesthetic parameters are specified as best endeavours targets in the Grid Contract, based on the historic performance of the supplies that previously existed in those areas.

By way of background, the *Water Supply (Safety & Reliability) Act 2008* requires Seqwater to prepare and comply with a Drinking Water Quality Management Plan. The Act requires Seqwater to have its Drinking Water Quality Management Plan approved by an independent, specialist water quality regulator (the Office of the Water Supply Regulator). The Act also makes it an offence for Seqwater to breach the Plan or the conditions of the Plan.

Seqwater's Drinking Water Quality Management Plan is prepared in accordance with guidelines made by the Office of the Water Supply Regulator. It identifies potential hazards and an assessment of the relevant risks and demonstrates how Seqwater addresses those risks, including through monitoring and verification programs and the water quality parameters to be used for indicating compliance.

Seqwater has provided the QCA with a copy of the approval of its overall Drinking Water Quality Management Plan by the Office of the Water Supply Regulator.

The WGM's concerns regarding the stringency of specifications for new water treatment plants, particularly in relation to the Kilcoy WTP, appear to focus on the limits for turbidity, measured in nephelometric turbidity units (NTU).

However, there appears to be some confusion caused by the fact that NTU is specified as a threshold for the visual aesthetic of water, as well as being a convenient measurement for the effectiveness of the filtering process used to remove pathogens.

Quite separately to the water quality limits around aesthetics, Seqwater is required under the Australian Drinking Water Guidelines (ADWG) to remove potentially harmful pathogens such as protozoa, cryptosporidium and giardia.

While the ADWG state that there should be no cryptosporidium and giardia in the water supplied, it provides only limited guidance on how to achieve the removal of these pathogens. In practice, Seqwater achieves compliance with this requirement in the filtration process step at conventional WTPs. The outcome of applying the necessary levels of filtration is water that may have turbidity levels far lower than would be required just for meeting aesthetic requirements.

This approach is consistent with industry practice. In terms of managing health risks associated with water quality, the World Health Organisation (WHO) and the Australian Guidelines for Water Recycling (equivalent to the ADWG for recycled water) deem that the acceptable level of health risk is 1 micro-DALY, or 10^{-6} DALYs (Disability Adjusted Life Year). In practice, taking cryptosporidium as an example, the acceptable level of risk as defined by the WHO, is a single cell in 79,000L of water. In practice it is not possible to take a water sample that large so to resolve this issue the water industry adopts a logarithmic removal approach (i.e. 90% removal of the hazard is one log, 99% is two logs, 99.9% is three logs etc). And the measure used by the water industry for assessing log removal is NTU (turbidity).

Formal standards for measuring log removals according to filtered water turbidity currently exist in the United States, Canada and New Zealand and it is apparent that these same standards are likely to be adopted in future in the ADWG in relation to health-based targets for cryptosporidium (see the NHMRC paper separately provided to the QCA). The same standards are applied by most other major water authorities around Australia.

These standards are equivalent to those adopted by Seqwater for all of its WTPs, including its specifications for new WTPs such as the new Kilcoy WTP.

In addition to suggesting targets and limits for various health and aesthetic parameters in water quality, the ADWG also requires a framework be applied to consider risk management in the production of drinking water. Seqwater undertakes water quality risk assessments for all its WTPs and new WTPs to mitigate the risks and potential hazards identified in its assessments, in compliance with the ADWG's requirements. If particular risks are identified in raw water sources that demand even further log removals than might be achieved through filtration, that is when additional barriers such as UV disinfection are considered.

In other words, while there is certainly a turbidity target for the purposes of water aesthetics, which Seqwater incidentally meets, in practice Seqwater supplies water that can have far lower turbidity than is required for aesthetic reasons, because it must separately take steps to meet its obligations to remove pathogens.

Also note that the lower levels of turbidity achieved through filtration is at a point in the treatment process, and that the level of turbidity in the water quality supplied may be higher than that after later processes are applied in a WTP, such as pH correction with the addition of lime.

The water quality issues identified in the WGM's submission, specifically relating to the new Kilcoy WTP, are discussed further in Chapter 3.

2.5 Capital planning and the new System Operating Plan (SOP)

In relation to a number of capital projects, the WGM's submission states that "[t]here is no reference to these works being required in 2012-13 in the interim statement from Seqwater to QWC" under the SOP process.

An understanding of the new SOP process explains why it should not be expected that Seqwater's interim statement to the QWC would reference all of the projects in its capital programme.

The SEQ System Operating Plan (SOP) is an instrument made under section 360V of the *Water Act 2000*. Its purpose is to allow the QWC to facilitate the achievement of the desired levels of service objectives for the region.

On 11 November 2011, the QWC released an updated version of the SOP which changed many components of the prior version. For this issue, the relevant change was the introduction of new requirements for forecasting and grid infrastructure planning activities, to inform the QWC in the performance of its function to assess and recommend options to

achieve water security. These provisions apply to all grid participants and, from mid-2012, will require the GSPs to prepare Annual Water Supply Asset Plans.

Seqwater has noted in previous submissions that the responsibilities of the various Water Grid entities are still in a transitional and developing state and, particularly in relation to long term planning, may not yet strictly or clearly align with the apparent intended market design. The new SOP process is being implemented for the first time over a period that overlaps with this review of GSCs.

The new forecasting and planning requirements in the SOP are split into two parts:

1. Interim provisions for the 2012-2013 financial year

The interim provisions require first the distributor-retailers to identify matters likely to have a material impact on the need for new/upgraded bulk supply works in 2012-2013, and to submit those matters to Seqwater, Linkwater, the QWC and the WGM. The WGM is then to consider the distributor-retailer's submission, identify such matters of their own, then submit those issues to the other parties.

Seqwater and LinkWater are then required to prepare statements addressing the matters raised in the WGM's statement and provide this response to the QWC, the WGM, the distributor-retailers and the other GSP (due by 1 March 2012).

2. Long term demand forecasting and water supply asset plans

The Market Rules did not previously contain any mechanism for the WGM to make the received demand information available to Seqwater or LinkWater to inform infrastructure planning decisions over the long term.

The forecasting of demand has, to date, therefore only been undertaken with an essentially short term view under the Market Rules, whereby grid customers provide the WGM with annual updates of their three-year demand estimates, with monthly updates by the GSPs on capacity/supply restraints and by customers on demand zone requirements/constraints. This information has then been used by the WGM in formulating its Annual Operating Strategy (now called an Annual Operations Plan) required under the SOP and in its monthly Grid Instructions.

The recent changes to the SOP introduce requirements for longer term (20 year) demand forecasts, commencing in 2012. The timeline for these 20 year demand forecasts are as follows:

- by 28 February each year, distributor-retailers must provide an annual demand forecast for the next 20 year period (commencing on 1 July) to the WGM and the QWC. These 20 year demand forecasts are to include volumetric requirements for individual demand zones or supply points, forecast assumptions and additional specifications such as

reliability, pressure or quality (and must align with Water Netserv Plans). The 20 year forecasts also require prior consultation with the GSPs.

- by 28 May each year, the WGM is required to consolidate these annual forecasts for the following 20 year period into a Consolidated SEQ Water Demand Forecast, which is to be provided to Seqwater, LinkWater and the QWC.
- by 19 September each year, Seqwater and LinkWater are then required to prepare Water Supply Asset Plans and submit them to the QWC, including plans, programs of work and associated budgets, processes and procedures in place to ensure the Consolidated SEQ Water Demand Forecast can be met. These plans must describe:
 - current asset capability to deliver services under a range of operating conditions;
 - how existing assets will be maintained/renewed;
 - how decisions will be made to retire assets and deliver new assets;
 - linkages with the plan of the other GSP (i.e. Seqwater’s plan must identify linkages to LinkWater’s plan, and vice versa); and
 - adequate consultation, including “to ensure all reasonable options have been appropriately investigated and considered prior to identification of specific capital solutions to meet the Consolidated SEQ Water Demand Forecast”.
- by 31 October each year, the QWC must then assess and endorse the Water Supply Asset Plans as having been prepared in accordance with the SOP and as enabling the QWC to perform its planning functions for achieving water security. Once endorsed, the Water Supply Asset Plans are provided to the WGM and the distributor-retailers.

As explained above, Seqwater is not required to reference its entire long term capital programme until it submits its Water Supply Asset Plan to the QWC on 19 September.

At the current stage of the new SOP process, specifically in the interim statement made to the QWC on 1 March 2012, Seqwater’s defined task was to respond to specific issues raised in the initial submission of the WGM, which itself was a response to specific issues raised in the initial submissions of the distributor-retailers.

For each capital project where the WGM’s submission implies an inconsistency between Seqwater’s interim SOP statement and its regulatory budget, Seqwater notes that the WGM has been involved in preliminary discussions on each of those projects and has also had visibility to the current year budget which includes operational expenditure relating to planning studies on them.

2.6 Regulatory budgeting for conditional capital projects

The WGM's submission raises a regulatory issue with respect to capital projects that are considered likely to be needed, but are conditional on independent events such as the outcomes of regional planning studies or government policy decisions.

Seqwater's approach has been to budget for capital projects that it considers are likely, on the balance of probabilities, to be needed in the relevant period in order to meet its obligations and business needs.

The WGM's submission appears to imply that, for projects which will proceed only if a certain condition is met, a finding of prudency should be withheld in the review process until such time as Seqwater can establish that the relevant condition has been met.

However, that approach would be inconsistent with the manner in which budgeting has been performed in this review process and in previous years. That approach would also transfer significant regulatory and financial risk onto Seqwater in the common situation where a condition is likely to be met after the review process but the project needs to be delivered in part or in full prior to the next review process. Furthermore, that proposed approach appears not to take account of how projects are commissioned and capitalised into the RAB in practice, nor the measures that already exist in the capitalisation process, and within the business itself, that prevent work on any projects that are not considered necessary.

In practice, for capital expenditure, any regulatory approval given in advance does not automatically lead to Seqwater receiving GSCs that reflect those (approved) budgeted capital costs. This is because:

- Seqwater derives no financial return from capital expenditure through its GSCs until such time as a capital project can be put into its Regulated Asset Base (RAB). And the QCA's current approach is that no capital project can be put into Seqwater's RAB until the project is commissioned and completed.
- Independent of the regulatory review process, Seqwater also has strict internal processes that examine the prudency and need for capital projects, including planning and validation processes and business case development and endorsement gateways in its Asset Management Framework, as well as specific internal governance and approval procedures.

Taking both of these factors into account, if a condition on a project did not eventuate, then Seqwater would not complete the project, would not incur the relevant expenditure, would not seek to have any value added to its RAB, and therefore would not receive GSCs that in any way reflected that the project had originally been budgeted.

In other words, irrespective of any notional regulatory approval that Seqwater may have obtained in advance for capital expenditure, if a condition for a project continuing is not met,

then it is unlikely that the capital would be expended or that there would be any resulting increase in Seqwater's GSCs.

2.7 Other issues

Regarding the possibility of the aquifers recommencing supply, at this stage Seqwater considers this highly unlikely due to the poor raw water quality, high cost of production and additional water quality risks. In any event that decision is likely to be made by the QWC, given its role, in consultation with Seqwater.

Chapter 3 – Capital projects

This Chapter examines the capital expenditure projects listed in the WGM's submission, including:

- South Maclean WTP;
- Woodford WTP and Caboolture WTP;
- Image Flat WTP;
- Molendinar WTP and Mudgeeraba WTP;
- Canungra WTP; Canungra Off-Stream Storage and Beaudesert WTP;
- North Stradbroke Island WTP;
- Capalaba WTP;
- Gold Coast Desalination Plant;
- Western Corridor Recycled Water Scheme;
- Lake Macdonald;
- Wyaralong WTP;
- Kilcoy WTP;
- Boonah-Kalbar WTP;
- Lowood WTP;
- Kooralbyn WTP;
- Rathdowney WTP;
- Jimna WTP; and
- Various SCADA projects.

3.1 South Maclean WTP

The WGM's submission suggests that supply is not required from the South Maclean WTP. While a decision was made not to include the South Maclean WTP in the option analysis for the Scenic Rim planning study, this does not, in and of itself, suggest that the South Maclean WTP is no longer required. The Scenic Rim Options Assessment Report actually concluded that "the upgrading (or decommissioning) of the South Maclean WTP does not materially impact the financial viability of the Beaudesert/Canungra options under assessment." It does not make any statement to indicate that supply is no longer required from South Maclean. There are a myriad of factors to be considered before proceeding with a decommissioning of the asset. For example, pump capacities and reservoir capacities in the region would need to be confirmed with the distributor/retailer. Such considerations are best made after a collaborative decision has been made by the QWC, the WGM, Linkwater and Seqwater, following the completion of the Final Report for the Scenic Rim regional study due mid to late April 2012.

Furthermore, it is important to consider how water allocations work in practice under Resource Operating Plans (ROPs) and Water Supply Schemes (WSS). It is not always a simple matter of being able to move water allocations between locations. In the Logan WSS, particular zones specify maximum allocations that can be taken and if South Maclean WTP was switched off, as is suggested, only 1,385ML of the 3,695ML in the Logan WSS would remain available for use at upstream locations such as Beaudesert. The difference would potentially be lost to the ocean and the system yield would be reduced accordingly. It would then be necessary to consider the timing and costs associated with bringing forward future water sources.

The WGM's submission also states that Wyaralong WTP could be an alternative source of supply, however separately in its submission states that Wyaralong WTP will not be required until 2024-25.

It is also the contention of the WGM that South Maclean is one of the highest cost water treatments plants on a per ML basis. When taken in isolation this statement is true, but not so when considered in a regional context. That is, when examining the costs of the WTPs available to service the regional areas adjacent to the Scenic Rim region, the statement would not hold true. Such cost of supply / supply availability perspectives are another key reason why Seqwater believes it is important not to pre-empt outcomes of the Regional Planning Study.

Finally, from a costing perspective the WGM's submission states total cost is \$4.4M, however only \$2.3M is proposed for 2012-13, which itself is conditional on the outcomes of the Planning Study. above. Finally, if it is decided that supply is not required from the South Maclean WTP, there will still be a need for operating expenditure associated with the decommissioning works.

3.2 Woodford WTP and Caboolture WTP

As noted in section 2.2 above, the WGM's submission makes a number of recommendations relating to the potential rationalisation of particular assets, including both the Woodford WTP and the Caboolture WTP, which mirror the outcomes of regional planning already conducted by Seqwater.

However, the WGM's comments appear to be inconsistent with Grid Instructions which require supply from the Woodford WTP and Caboolture WTP.

The proposed capital expenditure for the Woodford WTP and Caboolture WTP in 2012-13 is primarily related to renewal works rather than "upgrades". Some of this renewals work may still be required irrespective of whether supply is delivered by the plant, in order to maintain compliance with other legislative obligations.

With respect to the Caboolture WTP, switching off this plant as is suggested by the WGM would lead to a potential loss of water allocation (4,200ML). It would then be necessary to consider the timing and costs associated with bringing forward future water sources.

Finally, if it is decided that supply is not required from the Woodford WTP or Caboolture WTP, there will be a need for operating expenditure associated with the decommissioning works.

3.3 Image Flat WTP

The WGM's submission states that supply would not be required following connection to the Northern Pipeline Interconnector (NPI). However, further planning work is required before this conclusion can be made, including in relation to whether the pipeline will be designed for future bi-directional flow capability, and whether any NPI connection would be via the Image Flat WTP or direct to its supply area.

Seqwater considers that the work identified for 2012-13 (\$1.0M) will remain necessary, even if supply is only to continue for two to three years longer. The proposed works are for sludge handling and chemical dosing, much of which is required in order to maintain compliance with other legislative drivers, including environmental obligations.

Furthermore, switching off this plant as is suggested would lead to a potential loss of water allocation (16,500ML). It would then be necessary to consider the timing and costs associated with bringing forward future water sources.

Seqwater believes that further analysis and modelling should occur to understand the possible grid resilience impacts, especially considering additional load which may be placed upon Landers Shute.

The WGM submission states that removing supply from Image Flats will not impact on water security. This may be the case in isolation, but Seqwater believes that any decision surrounding plant decommissioning must be taken in the context of the total number of decommissioning plant, and the associated collective impact. In Seqwater's opinion there are a myriad of factors to be analysed and considered before proceeding with decommissioning of the Image Flat WTP – additional planning at a regional and asset level is required before committing to such a course of action.

Further, one of the proposed alternatives of the WGM is to source water from Noosa – this may not be cost effective owing to it being a considerably more expensive treatment plant to operate compared to Image Flat, largely as a function of water pumping costs. Again, Seqwater highlights the need for extensive studies of the regional area, and of the Image Flat asset itself.

The WGM also claims that the interim statement from Seqwater to the Queensland Water Commission, dated 28 February 2012, did not identify the need for capital upgrades to Image Flat be undertaken in 2012-13. In response to this claim, please refer to section 2.5 in Chapter 2 of this submission, 'Capital planning and the New System Operating Plan (SOP)'.

The WGM has submitted that Seqwater has proposed to upgrade the Image Flat Water Treatment Plant at an estimated cost of \$11.6 million, to be undertaken over 2012-13 to 2015-16 Seqwater is only proposing to spend \$1M in 2012-13 and the expenditure in the forward years would be conditional on the future of the plant. If it is decided that supply is not required from the Image Flat WTP, there will be a need for capital expenditure associated with the decommissioning works.

From a planning perspective, it is further noted that the planning study *Options Study for Bulk Supply to the Image Flat Sub-Region (2011)* recommended augmenting Image Flat with a grid supply, and rejected using the grid as a sole source of supply. Seqwater notes that the WGM was involved in this planning work.

Finally, if it is decided that supply is not required from the Woodford WTP or Caboolture WTP, there will be a need for operating expenditure associated with the decommissioning works.

3.4 Molendinar WTP and Mudgeeraba WTP

The WGM's submission considers that the current treatment capacities of the Molendinar and Mudgeeraba water treatment plants are adequate and it does not foresee a requirement to increase those capacities at any time in the foreseeable future. However it is important to note that the driver for the proposed works is not capacity augmentation, but rather renewals and water quality compliance. Outcomes of the mentioned trial of increased disinfectant dosing rates are being used to inform the study.

Further, the current sub-regional planning work is due for completion by late April 2012, and will also consider both network solutions and WTP solutions. As such, the study includes contributions from Linkwater and Allconnex. Seqwater cannot pre-suppose the outcomes of the planning study. The scopes listed at time of budgeting were indicative and subject to outcomes of the planning study. Seqwater is only proposing to spend \$4M in 2012-13 and the expenditure on the forward years would be conditional on the future of the plants.

The proposed expenditure at the Molendinar WTP and Mudgeeraba WTP reflects the contingent nature of the capital projects going forward, as a function of the a) requirements and b) strategic options that arise from the Sub-Regional Planning Process. The need to provide regulatory budgeting under uncertain conditions is addressed in detail in Chapter 2, section 2.6 'Regulatory budgeting for conditional capital projects'.

As an example of regulatory budgeting under uncertainty in the context of Molendinar WTP and Mudgeeraba WTP, the backwash pump and storage works are considered probable, but Seqwater has budgeted notional amounts without pre-empting the outcome of the Sub-Regional Planning work.

3.5 Canungra WTP and Off-Stream Storage, and Beaudesert WTP

As already discussed, the final report of the collaborative Scenic Rim Regional Planning study by QWC, WGM, Linkwater and Seqwater about the most cost effective way to supply the Scenic Rim region is due mid to late April 2012. At the time of budgeting, the Beaudesert and Canungra WTP upgrades were perceived as most likely options. However, should this study not demonstrate need, or suggest that the need is not immediate, the works will not go ahead. Regardless of the preferred outcome for increasing capacity and its timing, works may be still be required based on other drivers such as Environmental and Water Quality compliance and renewals.

Seqwater also acknowledges the more recent information provided by the WGM in its submission to the QCA around the forecast demand figures for Beaudesert and Canungra suggest a lower than expected rebound in demand following the severe drought. In particular, in the case of the Scenic Rim region, this rebound appears to be lower than

expected due to the effect of price increases and differences due to variations in non-residential consumption and the use of alternative sources, such as rainwater tanks. Should revised forecasts suggest that upgrades to capacity are able to be deferred, then CAPEX would be deferred.

Seqwater agrees that a staged approach should be taken if this is deemed to be the most efficient outcome. However such benefits should be weighed against the lower operating costs and longer asset lives associated with connection to the grid. Regardless of which option is ultimately preferred for the region, it is important that triggers for stages be reviewed and assessed as part of the on-going planning process.

Currently \$2.5M has been budgeted for 2012-13 for the Beaudesert WTP Upgrade works (out of a total project cost of \$9.1M), with \$0.9M budgeted for 2012-13 for the Canungra WTP Upgrade (out of a total project cost of \$1.1M) and \$0.5M budgeted for 2012-13 for the Canungra Water Treatment Storage (out of a total project cost of \$4.4m).

3.6 North Stradbroke Island WTP

The WGM indicated that Seqwater's budgeting for work required at the North Stradbroke Island WTP is pre-empting a decision by DERM. Seqwater is not pre-empting the DERM decision, some work will be required and Seqwater has made provision for this project in its budget.

DERM has recently delayed its decision regarding Herring Lagoon water allocations and source extraction delaying works until 2013-14.

Due to DERM's delayed decision, Seqwater will now delay capital expenditure on North Stradbroke Island WTP in its budget until 2013-14. This project will be included in Seqwater's 2013-14 submission to the QCA. Consequentially, Seqwater have budgeted \$1.1M for the North Stradbroke Island WTP in 2012-13.

By the time of Seqwater's next submission to the QCA, further planning work will be undertaken to ensure all prudency requirements are met.

3.7 Capalaba WTP

The WGM submission indicated it is concerned about Capalaba WTP planned capital expenditure for two reasons, namely:

1. Expansion of capacity could be met by using North Stradbroke Island supply; and

2. Upgrades for trihalomethanes (THM's) compliance should only be undertaken once new operating strategies are demonstrated to be insufficient.

Seqwater's primary reason for the proposed Capalaba WTP works is:

1. Renew individual assets at the end of their economic life;
2. Alter some equipment to meet environmental regulations; and
3. Improve some equipment to meet WH&S requirements.

In the process of this planned work Seqwater will increase the capacity slightly as it is most efficient to do so whilst addressing the actual driver of renewals. The increase in capacity is a small part of the planned expenditure in stage one.

Seqwater has included some capital expenditure (\$100,000) in stage one of the Capalaba WTP for a trial of possible treatments of THM's in the stage two development.

The WGM has previously notified Seqwater by email agreeing with the additional capacity parameters.

Seqwater has CAPEX of \$3M budgeted for 2012-13.

3.8 Gold Coast Desalination Plant

There was no mandate or requirement to include this in the comments made by Seqwater during the SOP process as per the earlier notes in this document. Claims by the WGM that improvements have not been demonstrated as existing capacity is adequate for system requirements, fail to address the actual drivers of this CAPEX. The autoflush proposal is not driven by capacity, but rather potential efficiency and WHS compliance. Had it been known that the GCDP would be operating on hot standby (or 33%) when it was constructed, these works would have been incorporated from the start. Seqwater believes the autoflush proposal is warranted and will provide further comment on this to QCA. Seqwater also notes that the QCA's consultants have recently assessed this proposed expenditure and found it to be prudent.

Currently \$2M has been budgeted for 2012-13 (this being the total project cost).

3.9 Western Corridor Recycled Water Scheme

The WGM has requested that Seqwater should incur no further costs on the Western Corridor Recycled Water Scheme (WCRWS) until commercial contracts for supply are executed.

Normal commercial arrangements will apply and Seqwater will not go ahead with the project unless and until customers are committed. Seqwater's approach has been to budget for capital projects needed in the relevant period in order to meet its obligations and business needs based on its assessment of likelihood of such expenditure being required. This item of CAPEX includes \$0.8m for the construction of a connection to a refinery and \$0.3m for the construction of treated water storage at the Gibson Island Advanced Water Treatment Plant.

Therefore, \$1.1M has been budgeted for 2012-13 (this being the total project cost).

3.10 Lake Macdonald

The WGM suggested in its submission that Seqwater include an option to lower the Lake Macdonald spillway in an attempt to defer costs.

The WGM also noted that Seqwater is required to upgrade the Lake Macdonald Dam as a regulatory requirement of the Department of Environment and Resource Managements dam safety regulator.

Seqwater is working with the Dam Safety Regulator to progress planning work to detailed design to best understand options and costs.

During planning the WGM's suggestion of lowering the full supply level was investigated, however it is not a viable option. Lowering the full supply level of Lake Macdonald Dam would not sufficiently reduce the factors of safety due to the area's high rainfall. Currently, \$1M has been budgeted for 2012-13 (out of total project cost of \$25.8M).

3.11 Wyaralong WTP

There has not been any formal notification to Seqwater that planning and design work for this treatment plant is not to continue. Seqwater is complying with government instructions relating to drought projects. If Seqwater receives formal contrary instructions this work would not proceed. The timing of this work can only be confirmed by QWC as it is within their remit to do so.

3.12 Kilcoy WTP

The WGM in their submission argues that the prudence of the solution for Kilcoy is yet to be demonstrated, however, they also note that the agreed improvements to the existing supply are required in order to meet contractual obligations. The WGM's concern lies in the fact that the project cost appears to be high, compared with benchmark rates for similar WTPs and is seeking a 3 month deferral to enable further comparison with a pipeline option.

Kilcoy township's water supply is currently sourced from the Kilcoy creek via an off-stream storage and supplied from the Kilcoy Water Treatment Plant (WTP). Seqwater is obliged to supply a sufficient quantity of water to meet demand under the Grid Instructions which is currently about 2 ML/d and expected to grow to 4 ML/d in 2031. The existing Kilcoy water supply system is unable to meet future demands primarily because the existing source, Kilcoy Creek, has insufficient capacity. The infrastructure is also at its capacity limit and its condition is poor.

There is an urgent need for improved reliability of water services to the township of Kilcoy and Seqwater has sought to achieve a solution to Kilcoy's water supply issues by summer 2012-13. Following receipt of tenders for design and construction, the market responded with prices above that budgeted for in Seqwater's approved business case.

A review of the business case was undertaken following assessment of the tenders in order to:

- Re-estimate the net present value (NPV) using the 'revised project budget' as the capital cost component for the options considered in the Business Case.
- Re-assess the cost estimated for the grid connection option to improve the level of accuracy for capital cost estimate. The grid connection option capital cost increased from \$30m to \$35m with the level of accuracy putting the range between \$25m and \$55m.
- Re-evaluate the assumptions and risks associated with the grid connection option to make an improved comparison with the Kilcoy WTP.
- Re-evaluate the scheduling for the grid connection option to identify the likely programming based on the revised timing.

This review indicated that the Kilcoy WTP was still the prudent and efficient option compared to a pipeline grid connection option involving a 45 km pipeline. In addition, the review confirmed that there are many unresolved risks and unknowns which are likely to result in a substantial increase in the capital cost for the pipeline option. These would become more evident should the pipeline option be further developed to a similar level as the Kilcoy WTP option. Finally, this assessment confirmed that the grid connection option is unlikely to be

able to supply water by early 2013 and that there are many other scheduling risks and uncertainties which are likely to result in further delays.

The revised project budget does not have an impact on the localised option as supply from Lake Somerset is required to maintain supply reliability, water quality and has sufficient water allocation. The existing Kilcoy WTP at Wade Street is not viable due to condition and capacity; a new WTP at the Kilcoy Somerset site remains the best site to treat water from Somerset Dam to supply to Kilcoy as per the previous business case. The urgency for a new water supply was unaltered by the market response.

Seqwater believes that sufficient consideration has been given to the regional (pipeline) option. The Net Present Value (NPV) analysis comparing a new Kilcoy WTP with other regional grid supply options was revised based on the revised project budget. The following changes were made from the previous NPV undertaken for the Business Case:

- Kilcoy WTP assuming \$18M instead of the \$11.45M.
- Woodford WTP capital costs increased in line with experience with Kilcoy.
- No change to operating costs.
- Pipeline costs revised for the grid pipeline to Kilcoy based on advice from GHD 13/5/2011.

The revised NPV comparison still shows that option 2, involving a new WTP at Kilcoy, is still the most efficient. The next favourable option is 4 which includes a new WTP at Woodford as well as Kilcoy. There is water allocation constraint in the medium term at Woodford, which would require an additional pipe connection at some time in the future. This is not included in the NPV which would increase its costs.

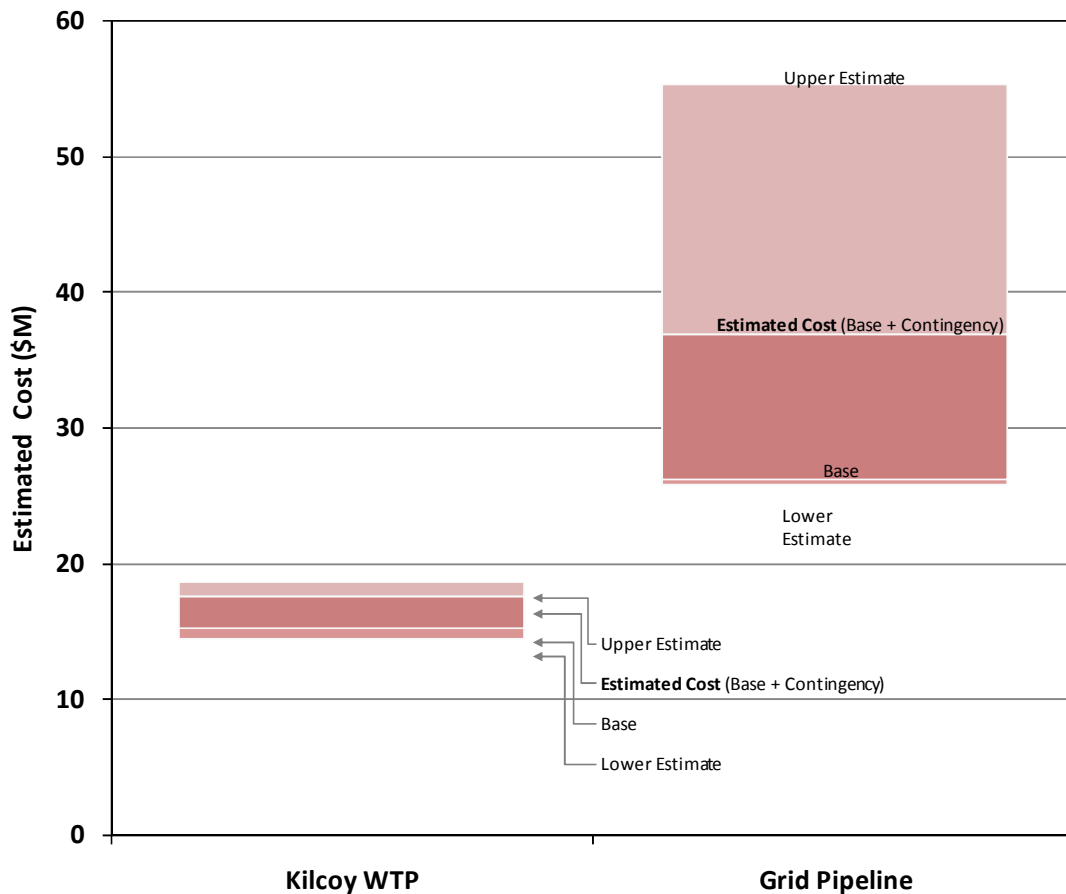
The revised budget estimate for the Kilcoy WTP now includes resolution of many risks which remain unknown for the comparative regional options. These risks have potential to significantly increase the actual costs for the pipeline option once progressed to a similar stage of development.

Kilcoy contingency and capital cost ranges

Stage	Contingency range	Capital cost range
Business case Kilcoy WTP costs	- 30% + 30 %	11.45M to 15.08M
Revised Kilcoy WTP budget	-5% + 11%	14.36M to 18.61M
Grid pipeline costs	-30% + 50 %	\$25M - \$55M

The figure below displays this information to allow an easier comparison of relative accuracies and contingencies between the options for capital costs.

Kilcoy contingency and capital cost ranges



It is important to note there is little opportunity to stage the construction of a pipeline to supply water to Kilcoy (i.e. the whole project would have to be constructed up front.) This would require a higher upfront capital commitment of around \$30m which does not account for the risks and contingencies estimated to be around 50%. In addition, some of the potential risk costs identified for the pipeline option which would push the pipeline NPV to the higher end of the estimated range include:

- The pipelines involve up to 45 kilometres of pipeline over a hilly terrain. In a more detailed design then was carried out this could lead to a need for:
 - Extra reservoir and subsequently pump station
 - Extra air lock control systems

- Additional secondary pump stations (only one pump station allowed)
- Need to revise design based on geology of pipe route
- The preliminary cost estimate did not allow for:
 - surge vessels or similar
 - rechlorination facilities
 - buildings to house pump stations
 - easement or land acquisition costs (These could add not only costs but also time delays to project completion.)
 - extra power supply (assumed power available at pump station site)
 - buying any offset habitat required. E.g. if we go through koala habitat, purchasing other land of similar habitat value may be required.
- The preliminary design did not confirm exact number, but made an allowance for estimated some:
 - 5 major creek crossings
 - 20 minor creek crossings
 - 20 road crossings
- The response from the market from the Kilcoy tenders highlights the premium for market risk in the current environment, namely:
 - Global financial crisis – increased the risk cost of money
 - Flood relief projects – increased demand for resources, escalating prices

These may apply to some components of the pipeline option and increase costs. It would be necessary to go to market to accurately quantify this cost risk.

- The grid pipeline options does not allow for any staging. The pipeline from Elimbah reservoir to Kilcoy is estimated to cost around \$35m, with potential delivery risks including:
 - Environmental – unfavourable EIS outcomes, approval for creeks crossing not approved
 - Business – a number of grid Entities involved, LinkWater, Unity Water, and Queensland Urban Utilities

- Engineering – right of way for pipeline leading to deviation from road reserve and land acquisitions

Kilcoy WTP Business Case was approved by the Seqwater Board in August 2010. The subsequent project development has resulted in a more detailed revised project estimate which exceeds the previous estimate adopted for the Business Case. The revised NPV comparison indicates that the previously proposed preferred option to adopt a new WTP for Kilcoy remains the most cost effective solution. The high up front capital costs (estimated at \$35m) mitigates against this option, with substantial associated risks. Scheduling risks show that it would be unlikely that it would be completed by early 2013.

3.13 Boonah-Kalbar WTP

The driver for the works undertaken in Stage 1 of the Boonah-Kalbar is raw water quality, reliability of supply and sludge management to achieve compliance with environmental obligations rather than capacity. The WGM's assertion that the need for improvements has not been demonstrated due to existing capacity being adequate for system requirements appears to overlook these important compliance obligations relevant to the first stage of the Boonah-Kalbar business case.

Addressing raw water quality is the primary driver for Stage 1 of these works and involves removal of pathogen risk, with \$5.3M (more than 80%) of the total \$6.4M for stage 1 related to the intake and raw water pump station. This is because the current water extraction location is unreliable and failed during the recent drought. This will allow for a new raw water intake at the Gorge, with a new pump station and raw water pipeline to Kalbar WTP. The remaining 20% of stage 1 relates to plant automation and dosing system upgrade (\$670,000 2012-2014) and sludge treatment improvements (\$520,000, 2012-2014), both aimed at ensuring compliance with water quality and quantity requirements.

A risk analysis of the Kalbar WTP (HACCP September 2010) indicated the risk of the raw water being contaminated with pathogens such as bacteria, viruses and protozoa to be very high to extreme, and the risk of the plant not having the capacity to manage viruses and protozoa is high to very high, related to chlorination contact time and the filters. Relocating the raw water extraction point will reduce this risk. In addition, under the current manual operational regime, control, monitoring and dosing system improvements are required to negate the need for additional resources to man the plant beyond normal work hours to meet demands. Because the Kalbar WTP is not connected to the Water Grid, alternative water supply sources are not readily available.

The business case prepared recently for Boonah-Kalbar notes that detailed business cases for stages 2 and 3 are to be completed in the future, subject to close monitoring of increases in demand. Where demand forecasts prove to be lower than those currently suggesting capacity upgrades by 2019, then Seqwater would take advantage by deferring further CAPEX until needed.

Currently Seqwater has budgeted \$2.5 M for the Boonah - Kalbar WTP Upgrade works (4 ML/d) in 2012-13.

3.14 Lowood WTP

Planning work is underway as per the current year's operational budget.

Again, this is not an upgrade of capacity but is work proposed due to environmental requirements relating to sludge handling work.

Seqwater has undertaken a number of studies on sludge requirements both generally and specifically for Lowood. Independent consultants engaged by Seqwater have recommended that the sludge handling facilities be upgraded. The plant has been operating at below 50% capacity and has been struggling to deal with sludge at this load. Wet weather creates significant issues and short-term measures have been put in place to deal reactively with those issues. There has been a recent overflow incident. The result is a need to proceed with a longer term solution.

This information and analysis has been provided to QCA's consultants, SKM in the course of this pricing review. Seqwater understands that SKM have agreed with the requirement to undertake works for environmental compliance reasons.

The planning work has not yet progressed to business case completion stage. As discussed in section 2.6 of this document, Seqwater projects will be a various stages of planning and it will budget for works which it believes it will undertake in the price reset period. The commitment to that expenditure is dependent on satisfying Seqwater's internal gateway process. In the case of Lowood works are clearly required however the detailed solution has not been finalised.

3.15 Kooralbyn WTP

In its submission the WGM raised several issues with Seqwater's proposed capital expenditure at the Kooralbyn WTP, namely:

1. Further information is required to demonstrate the need for the project;
2. Water quality risks need further testing to justify capital expenditure;
3. Sludge handling equipment should be sized for predicted average demand of 2031 (1.2ML per day); and
4. Sufficient reticulation storage should be maintained to ensure reliability during emergency events.

Seqwater is currently in the planning stage for the Kooralbyn WTP and has not completed its evaluation of the possible options. The proposed capital expenditure was included in Seqwater's budget to ensure funding is available when the desired option is chosen.

Currently, Seqwater considers the main drivers for the Kooralbyn WTP project are environmental and water quality regulatory compliance. Water quality risks will be identified and investigated through the planning study and later stages of development.

Preliminary investigations show the clarifier and sludge works, are intrinsically related and should occur together. The current clarifier has no sludge outlet valve therefore the only method for cleaning is to dewater, then remove sludge to the lagoons in one large job, thereby placing the lagoons under additional pressure.

Seqwater is not currently planning to increase the capacity of Kooralbyn WTP. Further information will be made available once the planning study is complete. If the planning study indicates this project is not yet required then the project will not proceed.

Seqwater has budgeted \$0.9M for the sludge handling and \$0.5 M for the clarifier in 2012-13 (out of a total budget of \$1.65 M, including \$0.15 M already budgeted in 2011-12).

3.16 Rathdowney WTP

In its submission the WGM raised several issues with Seqwater's proposed capital expenditure at the Rathdowney WTP, namely:

1. Further information is required to demonstrate the need for the project;
2. Sludge handling equipment should be sized for predicted average demand of 2031 (0.2ML per day); and
3. Sufficient reticulation storage should be maintained to ensure reliability during emergency events.

Again, Seqwater is currently in the planning stage for the Rathdowney WTP and has not completed its evaluation of the possible options. The proposed capital expenditure was

included in Seqwater's budget to ensure funding is available when the desired option is chosen.

Currently, Seqwater considers the main drivers for the Rathdowney WTP project are environmental and water quality regulatory compliance. Seqwater is not currently planning to increase the capacity of Rathdowney WTP. Further information will be made available once the planning study is complete.

If the planning study indicates this project is not yet required then the project will not proceed.

Seqwater has budgeted \$0.5M for the sludge handling (out of a total budget of \$0.65 M, which includes \$0.15 M already budgeted in 2011-12).

3.17 Jimna WTP

In its submission the WGM raised several issues with Seqwater's proposed capital expenditure at the Jimna WTP, namely:

1. Further information is required to demonstrate the need for the project; and
2. Seqwater has already improved the Jimna WTP. The WGM is not aware of any further issues in the Jimna WTP.

Seqwater did not supply full information about this project in its original submission as it is a small capital project. The QCA and SKM have since indicated the Jimna WTP project is part of the sample of capital projects investigated in the regulatory evaluation.

Seqwater has internally approved a business case for the Jimna WTP capital works. The main drivers for the work are renewals, compliance and efficiency. The renewals part of the project relates to a new raw water pump, gravity filter and asset ownership issues. Compliance issues relate to environmental requirement for clarifier and sludge handling and WH&S requirements for chemical delivery, handling and dosing. Delivery of this project will also improve efficiency, resulting from the additional instrumentation, communications and plant monitoring associated with the program.

Seqwater does not currently intend to expand the capacity of Jimna WTP and the capital works do not include fluoridation capability.

Seqwater has budgeted \$1.7M for the sludge handling (out of a total budget of \$1.9M, which includes \$0.25M already budgeted in 2011-12).

3.18 Various SCADA projects

Seqwater notes the WGM's statement that a well managed SCADA system is essential to effective operation of the Water Grid and that there is a need to upgrade existing systems. Seqwater is developing and following an overall strategy for deciding the scope and method of its implementation of SCADA works.

It is not clear as to why the WGM has included this project on its list of "questioned projects" given it states that the project is needed. The size of the overall project is quite large, increasing the magnitude of the WGM's questioned CAPEX expenditure considerably (more than 20%).

Currently \$1.7M has been budgeted for 2012-13 (out of a total project cost \$37.9M).